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Knowledge and Attitude of Urban Pregnant Women of Bangladesh Toward Nutrition, Health Care Practice and Delivery Place

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This study reports an investigation about knowledge and attitude of urban pregnant women on nutrition and delivery place and an attempt has also been made to identify factors that are closely related to these behaviors based on primary data. The analysis shows that educational status of pregnant women, their occupation, their husband's occupation, monthly family income have significant influence on knowledge and attitude of pregnant women toward nutrition and health care practice. The result also shows that opinion about place of delivery depends on educational status and occupation of pregnant women and monthly family income.

Key words: Educational status of pregnant women and their husband, women's occupation, husband occupation, place of delivery, cross-tabulation, logistic regression

INTRODUCTION

Pregnancy is a miraculous process. It is a time when a woman should make every effort to tune into her body and the baby wish the support of her surroundings. A woman's knowledge of pregnancy and giving birth is instinctual and should be very empowering. Pregnancy is the most nutritionally demanding time of a woman's life. Woman body needs enough nutrients everyday to support the growth of her baby. Pregnant women need more calories and essential nutrients than other women. If the nourishment needed for babies developing tissues and organs is inadequate when their baby needs it, he/she may not develop normally.

The point is that pregnancy is a special time when a woman is required to make arrangements for increased rest and self care. If she does not do this, she could be setting herself up for fatigue.

Low birth weight babies grow and develop less well and have poorer chances of survival than normal birth weight babies^[1]. A large number of investigations over past few decades have indicated that the causality of low birth weight is multifactorial^[2]. Among the many maternal and environmental factors influencing fetal growth and development, diet and nutritional status play important critical rules^[3].

The overall knowledge of the nutrition situation during pregnancy in Bangladeshi women is inadequate^[4].

It is both the quantity and quality of food consumption that determines an individual nutritional well being. In the case of South Asia, women are lacking in much consume as well as what kind of food they consume. Pregnancy, the most vulnerable time for a woman from a health perspective, is an example of this. About 60% of South Asian women in their child bearing years under weight due to a lack of proper nutrition during their own childhood^[5].

Pregnant women are the main victims at the undesirable dietary practices, which are responsible for malnutrition. A women during her pregnancy and lactating refrains from eating certain kinds of food, particularly protein rich foods like meat, fish, pulses etc. In some countries like Tunisia, Bangladesh, Peru and Jordan there is a common belief that a women should eat less than normal during pregnancy, while most other mothers believe that normal amount of food should be eaten at this time. Comparatively fewer mothers in all countries see the need to consume more food during pregnancy period. The main reasons for eating less food is to prevent a large foetus or a difficult delivery, or because it is customary^[6].

Pregnant women in Bangladesh are discouraged from taking fruits, eggs, milk and some fishes on the basis of

superstition despite the fact that the nutrient and energy requirements of pregnant women are higher than normal. Generally young women were not aware of the need for medical care during pregnancy or delivery. They had little idea about what to expect during pregnancy and delivery and only vague ideas about possible complications.

The study gathered information on issues related knowledge, attitude and practices of pregnant women towards nutrition, some socio-economic and demographic characteristics, pregnancy and rest, social support, food intake and health seeking behaviors during pregnancy and delivery. This study also tries to find out factors that are closely related to the pregnant women's nutritional status and opinion about place of delivery.

MATERIALS AND METHODS

The present study was based on data collected from Dhaka metropolitan area of Bangladesh. Study area has been divided into three categories i.e. posh area, medium standard area and low medium standard area. From each area two maternity hospitals or clinics (one from Govt. and other from non Govt.) have been selected on personal judgment. A sample of 350 pregnant women has been interviewed from these six maternity hospitals or clinics purposively during the period of two weeks.

Some frequency tables and contingency tables have been used to know the overall idea and association of variables such as education, occupation, family income, age of respondent, opinion about taking less food in pregnancy period, opinion of taking some fishes, desired place of delivery, regular check up in clinic, taking rest, taking milk etc.

For two-way cross tabulation the following variables have been considered:

| Name of variables | Category |
|---|--|
| Desired place of delivery | Clinic=1, Home=0 |
| Taking rest | Yes=1, No=0 |
| Regular checkup in clinic | Yes=1, No=0 |
| Opinion about taking less food in pregnant period | Yes=1, No=0 |
| Opinion about taking some fishes | Yes=1, No=0 |
| Opinion about taking milk | Yes=1, No=0 |
| Educational status of women | Illiterate=1, Only reading and writing =2, Below SSC=3, SSC=4, HSC=5, Graduation=6, Master=7, Other=8 |
| Women's occupation | House wife=1, Service holder=2, Business=3, Other=4 |
| Husband's occupation | Unemployed=1, Government service=2, Private service=3, Large scale businessman=4, Small scale businessman=5, Other=6 |
| Monthly family income | Less than 10000=1, (10000-20000)=2, (20001-30000)=3, (30001-40000)= 4, (40001-50000)=5, 50001 and above=6 |

Logistic regression analysis: In this analysis we try to investigate the influence on the opinion about desired place delivery, regular check up in clinic and suffering from disease in pregnant period. For this three logistic regression models considered. The dependent variables and independent variables are as follows:

Logistic regression model for opinion about desired place of delivery

| Variable | Category |
|---|--------------------------------------|
| Dependent: Y =Opinion about desired place of delivery | Clinic=1, Home=0 |
| Independent: | |
| X ₁ =Educational status of women | Literate=1, Illiterate=0 |
| X ₂ =Educational status of husband | Literate=1, Illiterate=0 |
| X ₃ =Women's occupation | Service=1, House wife=0 |
| X ₄ =Husband's occupation | Employed=1, Unemployed=0 |
| X ₅ =Monthly family income | 10000 and above=1, Less than 10000=0 |

Logistic regression model for regular check up in clinic

| Variable | Category |
|--|--------------------------------------|
| Dependent: Y=Regular check up in clinic | Yes=1, No=0 |
| Independent: | |
| X ₁ = Educational status of women | Literate=1, Illiterate=0 |
| X ₂ = Educational status of husband | Literate=1, Illiterate=0 |
| X ₃ = Women's occupation | Service=1 House wife=0 |
| X ₄ = Husband's occupation | Employed=1, Unemployed=0 |
| X ₅ = Monthly family income | 10000 and above=1, less than 10000=0 |

Logistic regression model for suffering from diseases in pregnant period

| Variable | Category |
|---|-----------------------------|
| Dependent: Y=Suffering from diseases in pregnant period | Yes=1, No=0 |
| Independent: | |
| X ₁ =Type of house | Building=1, Semi building=0 |
| X ₂ =Source of drinking water | Tube well=1, Supply=0 |
| X ₃ =Taking milk | Yes=1, No= 0 |
| X ₄ =Educational status of women | Literate=1, Illiterate=0 |
| X ₅ =Women's occupation | Service=1, House wife=0 |
| X ₆ =Regular check up in clinic | Yes=1, No=0 |
| X ₇ =Taking banana | Yes=1, No=0 |

RESULTS AND DISCUSSION

Most of the respondents (pregnant women) of this study belong to the age group 20-29 (about 76%) and average age at marriage of respondents is about 20 years.

The frequency Table 1 and 2 show that 23% pregnant women have education below SSC followed by only reading and writing (21%) and 17% have completed their graduation. Most of the women's husbands are graduated (21%) followed by Master (20%) and below SSC (17%). 82% women are housewife followed by service holder (11%). Most of the husbands are in private service (43%) followed by small-scale business (24%). Majority of the respondents monthly family income is less than 10000 (71%). Maximum women (73%) prefer clinic to home for delivery place.

In this study, 50% women are carrying their first baby and most of the current pregnancy are desired (about 82%). Sixty eight percent respondents live in building followed by semi-building (27%). Supply water is the main source drinking water for urban women (57%)

Table 1: Educational status of women and their husband

| Level of education | No. of Women* | No. of Husband* |
|--------------------------|---------------|-----------------|
| Illiterate | 23(6.6) | 9(2.5) |
| Only reading and writing | 72(20.6) | 47(13.4) |
| Below SSC | 81(23.1) | 61(17.4) |
| SSC | 47(13.4) | 50(14.3) |
| HSC | 42(12.0) | 36(10.3) |
| Graduation | 58(16.6) | 74(21.1) |
| Master | 25(7.1) | 69(19.7) |
| Other | 2(0.6) | 4(1.1) |
| Total | 350(100.0) | 350(100.0) |

* Figures within parentheses indicate percentage of total

Table 2: Occupational status of women and their husband

| Occupational level of women | No. of women* | Occupational status of husband | No. of husband* |
|-----------------------------|---------------|--------------------------------|-----------------|
| House wife | 285(81.4) | Unemployed | 2(5.0) |
| Service holder | 40(11.4) | Government service | 40(11.4) |
| Business | 8(0.9) | Private service | 149(42.6) |
| Other | 17(4.9) | Large scale businessman | 34(9.7) |
| Total | 350(100.0) | Small scale businessman | 84(24.0) |
| | | Other | 41(11.7) |
| | | Total | 350(100.0) |

* Figures within parentheses indicate percentage of total

followed by tube-well (41%). About 90% pregnant women take rest and about 92% women get their husband help in pregnant period. Most of the respondents (84%) go to the clinic for regular check up. Fifty nine percent respondents are taking medicine for sickness during pregnancy. Pregnant women are aware of vaccination and 78% of them are taking vaccine. About 75% women believe that mother's malnutrition is the main cause of child malnutrition.

Food taboo and eating behavior are the most common factor for pregnant women all over the world. Most of the respondents of our study have positive opinion about taking food. Some disbelief exists in our society about taking milk and certain fruits (pineapple, banana). From the study it is observed that pregnant women do not take milk (21%), Pineapple (75%), Banana (10%) for various disbeliefs.

From the Table 3 it is seen that opinion about taking less food in pregnancy period is significantly related with age and educational status of women. Comparatively high aged and more educated women are more conscious about not taking less food in the period of pregnancy. There is a significant relationship between educational status of women and opinion about taking some fishes, desired place of delivery and regular check up in clinic. This imply that educated women have less disbelief about taking some special fishes and they are also interested to go to clinic for regular check up and delivery.

Again it is observed that monthly family income, women's occupation, husband's occupation are significantly associated with desired place of delivery. Higher status job and family with relatively more income prefer clinic to home for delivery. Taking rest and taking milk are essential for pregnant women. Analysis shows

Table 3: Cross-tabulation

| Variable | Assymp. sig.(2-sided) |
|--|---------------------------|
| Educational status of pregnant women | |
| Opinion about taking less food in pregnant period | $\chi^2_{(7)}26.511^*$ |
| Opinion about taking some fishes | $\chi^2_{(7)}13.093^{**}$ |
| Desired place of delivery | $\chi^2_{(7)}86.204^*$ |
| Taking rest | $\chi^2_{(7)}13.562^{**}$ |
| Regular check up in clinic | $\chi^2_{(7)}49.624^*$ |
| Taking milk | $\chi^2_{(7)}27.271^*$ |
| Desired place of delivery and | |
| Monthly family income | $\chi^2_{(3)}24.460^*$ |
| Husband's occupation | $\chi^2_{(3)}21.357^*$ |
| Women's occupation | $\chi^2_{(3)}13.779^{**}$ |
| Age of mother and opinion about taking less food in pregnancy period | $\chi^2_{(4)}15.608$ |

* $\chi^2 < 0.01$, ** $\chi^2 < 0.05$, *** $\chi^2 < 0.10$

that more educated women have positive attitude about taking milk and taking rest.

Logistic regression analysis: Table 4 shows that opinion about desired place of delivery (coded 1 for clinic and 0 for home) is significantly dependent on educational status of pregnant women, monthly family income. Although significant level is relatively high (about 11%), women's occupation is an important influencing factor of opinion about desired place of delivery. All the independent variables have positive regression coefficient. Again from the odds ratio it is clear that literate women are about four times more favor to go to clinic for delivery than illiterate women. The family whose income is TK. 10000 and above wants to go to clinic for delivery about three times higher than those family with income less than 10,000. Again women having service prefer clinic for delivery two times higher than housewife to home.

Table 5 indicates that to go to regular check up in clinic of pregnant women (coded 1=yes and 0=no) is significantly dependent on educational status of husband and women's occupation. All the independent variables have positive regression coefficient. From the odds ratio it is clear that literate women and women's having service about 2.7 times and 1.21 times, respectively to go to clinic for regular check up than illiterate women and housewives.

Table 6 shows that suffering from disease in pregnant period (coded 1 for yes, 0 for no) is significantly dependent on type of house and taking milk. The coefficients of regression of type of house and taking milk

Table 4: Linear logistic regression analysis for opinion about desired place of delivery

| Variables | Coefficient | SE | Sig. | Odds ratio |
|-------------------------------|-------------|--------|-------|------------|
| Educational status of women | 1.310 | 0.337 | 0.000 | 3.705 |
| Educational status of husband | 0.411 | 0.385 | 0.286 | 1.508 |
| Women's occupation | 0.740 | 0.464 | 0.111 | 2.096 |
| Husband's occupation | 6.511 | 13.500 | 0.630 | 672.667 |
| Monthly family income | 1.011 | 0.423 | 0.017 | 2.748 |
| Constant | -6.915 | 13.503 | 0.609 | 0.001 |
| Model chi-square | 62.081 | | 0.000 | |

Table 5: Linear logistic regression analysis for regular check up in clinic

| Variables | Coefficient | SE | Sig. | Odds ratio |
|-------------------------------|-------------|--------|-------|------------|
| Educational status of women | 0.575 | 0.426 | 0.177 | 1.778 |
| Educational status of husband | 0.992 | 0.446 | 0.026 | 2.696 |
| Women occupation | 0.189 | 0.496 | 0.703 | 1.208 |
| Husband occupation | 8.257 | 22.241 | 0.710 | 3853.028 |
| Monthly family income | 0.705 | 0.498 | 0.157 | 2.024 |
| Constant | -7.767 | 22.243 | 0.725 | 0.000 |
| Model chi-square | 29.200 | | 0.000 | |

Table 6: Linear logistic regression analysis for suffering from disease in pregnant period

| Variables | Coefficient | SE | Sig. | Odds ratio |
|-----------------------------|-------------|-------|-------|------------|
| Type of house | -0.697 | 0.418 | 0.095 | 0.498 |
| Source of drinking water | 0.096 | 0.404 | 0.813 | 1.100 |
| Taking milk | -0.744 | 0.393 | 0.058 | 0.475 |
| Educational status of women | 0.230 | 0.422 | 0.586 | 1.258 |
| Women's occupation | -0.338 | 0.476 | 0.477 | 0.723 |
| Regular check up in clinic | 0.282 | 0.492 | 0.566 | 1.326 |
| Taking banana | 0.003 | 0.556 | 0.996 | 1.003 |
| Constant | -1.327 | 0.701 | 0.058 | 0.265 |
| Model chi-square | 8.837 | | 0.265 | |

have negative and the odds ratio of this analysis indicate that women who are staying in building are less sufferer (about half) in pregnant period than women who are staying in semi-building. Similarly women's who are taking milk are less sufferer (about half) in pregnant period than who are not taking milk.

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